

Claims

We claim:

1. A sweeper comprising:

5 a first main wheel being capable of spinning in both a
counterclockwise and a clockwise direction;

a brush wheel driven by said main wheel and being
capable of spinning in a counterclockwise direction
irrespective of the spinning direction of the main wheel;

10 a plurality of intermediate wheels capable of
translating the spinning motion from said main wheel to
said brush wheel; and

each of said wheels capable of simultaneous and non-
slip spinning.

15 2. The sweeper of claim 1 wherein said wheels comprise
gears, said plurality of intermediate wheels comprising a
first and second drive wheels and third gear wheel, said
first and second drive wheels having gears;

20 said first drive wheel capable of spinning in a
clockwise direction, said second drive wheel capable of
spinning in a counterclockwise, said first and second drive
wheels capable of being in direct contact with each other,
said third gear wheel capable of spinning in a
counterclockwise direction, said third wheel being in
25 direct contact with both the first drive wheel and the
brush wheel;

30 said first and second drive wheels each having an end
gear, said first end gear capable of connecting with main
wheel when said main wheel spins in a clockwise direction
and said second end gear capable of connecting with said
main gear when said main gear spins in a counterclockwise
direction.

3. The sweeper of claim 2 having a case and a handle, the handle connected to the case and capable of being removed from the case.

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4. The sweeper of claim 3 having a second main wheel and an axel connecting said second main wheel to said first main wheel, said first and second main wheels capable of fitting within said case.

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5. The sweeper of claim 4 wherein said brush wheel having a gear capable of rotating said brush wheel simultaneously with said first gear.

15 6. The sweeper of claim 5 wherein each of said main wheel is at least twice the diameter of each respective end wheel.

7. The sweeper of claim 6 wherein the first and second gear wheel are each the same diameter and each a larger diameter than the end wheel and a smaller diameter than said main wheel.

20 8. The sweeper of claim 7 wherein the brush wheel being a smaller diameter than said first and second gear wheel and larger in diameter than said end wheel.

25 9. The sweeper of claim 8 wherein the third gear wheel having substantially the same diameter of the brush wheel.

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10. A sweeper comprising a brush wheel, first and second drive wheels, a first and second end wheel, and a first and second main wheel;

5 wherein each main wheel is capable of automatically shifting to the first or second end wheel, whereby the brush wheel is capable of spinning in a single direction regardless of the direction of the sweeper; and

wherein the drive wheels are capable of simultaneous and non-slip spinning.

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11. The sweeper of claim 10 comprising a retainer for holding each main wheel to said sweeper; where each wheel comprises gears and each gear capable of continuous non-slip spinning.

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12. The sweeper of claim 11 having a container, the container having a dust pan, the dust pan having a semicircular shape.

20 13. The sweeper of claim 12 having a rear wheel capable of supporting the rear of the case.

14. The sweeper of claim 13 having a handle.

25 15. The sweeper of claim 14 where said